UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,399	06/26/2001	Fernando Incertis Carro	FR920000027US1	2163

7590 03/15/2006

IBM CORPORATION
INTELLECTUAL PROPERTY LAW DEPT.IQOA/BLDG. 040-3
1701 NORTH STR EET
ENDICOTT,, NY 13760

EXAMINER	
SMITH, PETER J	
ART UNIT	**PAPER NUMBER**
2176	

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/892,399	CARRO, FERNANDO INCERTIS	
	Examiner	Art Unit	
	Peter J. Smith	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,18-25 and 31-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,18-25 and 31-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/7/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications: amendment filed 1/3/2006, IDS filed 11/7/2005.

2. Claims 1-10, 18-25, 31-38 are pending in the case. Claims 1, 18, and 31 are independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 7, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al. (hereinafter "Robinson"), "A framework for interacting with paper", Eurographics '97, Volume 16, Number 3 – [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9 in view of Musk et al. (hereinafter "Musk"), US 6,148,260 continuation filed 11/8/1996.

Regarding independent claim 1, Robinson teaches defining a referenced item in an electronic document in sections 3, 4, 4.1, and 4.4. Robinson teaches wherein the electronic document is not derived from the physical document in section 4.1. Robinson describes here that animated documents are created with a fairly conventional WYSIWYG editor. Thus, the electronic document is created with electronic document editing software and thus is not necessarily derived from a physical document. Robinson does disclose further than the

electronic document can additionally be derived by scanning conventional printed documents, however this is in addition to creating the electronic document via electronic document creation software. Robinson teaches determining the absolute coordinates of the referenced item in sections 3 and 4.4. Robinson teaches defining a link to the physical document in sections 3, 4, 4.1, and 4.4. Robinson teaches encoding the absolute coordinates in the link in sections 3 and 4.4. An electronic document and physical document work in tandem in the DigitalDesk to create and animated document.

Robinson does not teach wherein the referenced item is related to a geographic location or wherein the absolute coordinates include geographic coordinates. Musk does teach a map document which contains reference items related to geographic locations and identified by geographic coordinates in fig. 2 and col. 1 lines 32-57. The map facilitates a user search of business services in a particular geographic area.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the map and geographic coordinate teachings of Musk to have improved the enhanced document of Robinson so that the paper document of Robinson would have presented a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map. Robinson teaches in the last three sentences of section 1 that its system has been re-engineered for more general use. Maps are traditionally composed of paper and thus would have been a good candidate for the general use DigitalDesk system taught by Robinson.

Regarding dependent claim 2, Robinson teaches encoding an address of a second electronic document in the link in sections 3, 4, 4.1, and 4.4. The electronic document paired with the paper document contains hybrid links composed of the interactor coordinates and the associated target location stored in the registry to point to other electronic resources such as other electronic documents.

Regarding dependent claim 3, Robinson teaches wherein the address of the second electronic document is a Uniform Resource Locator address of a web server hosting the second electronic document. The registry is a server which maintains the hyperlinked documents and the links between them.

Regarding dependent claim 4, Robinson teaches storing the coordinates in a table in sections 3 and 4.4. The each page representation in the registry maintains the associations between the coordinates and the interactors, or reference items, on the page.

Regarding dependent claim 7, Robinson does not teach wherein the referenced item is related to a geographic location; the absolute coordinates include geographic coordinates; and wherein the physical document includes a map. Musk does teach a map document which contains reference items related to geographic locations and identified by geographic coordinates. The map facilitates a user search of business services in a particular geographic area.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the map and geographic coordinate teachings of Musk to have improved the enhanced document of Robinson so that the paper

document of Robinson would have presented a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map. Robinson teaches in the last three sentences of section 1 that its system has been re-engineered for more general use. Maps are traditionally composed of paper and thus would have been a good candidate for the general use DigitalDesk system taught by Robinson.

Regarding dependent claim 8, Robinson teaches wherein the electronic document is a hyper text markup language document and wherein the link uses syntactic conventions of hyper text markup language in the abstract and sections 4, 4.1, and 4.4.

Regarding dependent claim 10, Robinson does not teach wherein the geographic coordinates include longitude and latitude. Musk does teach wherein the geographic coordinates include longitude and latitude in col. 3 lines 42-44. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the longitude and latitude geographic coordinates to have improved Robinson so that the map paper document could have been used and interacted with using the DigitalDesk. Robinson teaches absolute coordinates relating to reference items on the document, but not longitude and latitude geographic coordinates, because Robinson does not specifically discuss a map example. It would have been obvious and desirable to have enhanced a traditional paper map document with the electronic reference information as taught by Robinson and Musk so that a user could have received detailed information about businesses and services available in the area displayed by the map.

5. Claims 5-6, 9, 18-25, and 31-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al. (hereinafter "Robinson"), "A framework for interacting with paper", Eurographics '97, Volume 16, Number 3 – [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9 in view of Musk et al. (hereinafter "Musk"), US 6,148,260 continuation filed 11/8/1996 and Thompson et al. (hereinafter "Thompson"), US 5,986,401 patented 11/16/1999.

Regarding dependent claim 5, Robinson teaches computing camera coordinates from the absolute coordinates of the referenced item in sections 3 and 4.4. Robinson teaches a calibration relationship, the desk being aligned with the physical document, and the calibration relationship being between the absolute coordinates of a selected calibration location and calibration camera coordinates of the selected calibration location on the desk, the selected calibration point having been selected from the electronic document and the desk having been selectively activated at a position corresponding to where the calibration location appears in the physical document in section 4.2. Robinson does not teach computing foil coordinates because Robinson uses a camera location system instead of a touch foil system. However, Robinson does teach the possibility of using a touch foil to identify coordinates instead of a camera in section 5. Thus, Robinson teaches that foil coordinates could have been implemented in place of camera coordinates.

Robinson does not teach wherein the referenced item is related to a geographic location or wherein the absolute coordinates include geographic coordinates. Musk does teach a map document which contains reference items related to geographic locations and identified by

geographic coordinates. The map facilitates a user search of business services in a particular geographic area.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the map and geographic coordinate teachings of Musk to have improved the enhanced document of Robinson so that the paper document of Robinson would have presented a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map. Robinson teaches in the last three sentences of section 1 that its system has been re-engineered for more general use. Maps are traditionally composed of paper and thus would have been a good candidate for the general use DigitalDesk system taught by Robinson.

Robinson does not teach use of an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil taught by Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

Regarding dependent claim 6, Robinson teaches storing camera coordinates and absolute coordinates in table called a page representation in section 3 and 4.4. Robinson does not teach storing foil coordinates because Robinson uses a camera location system instead of a touch foil system. However, Robinson does teach the possibility of using a touch foil to identify coordinates instead of a camera in section 5. Thus, Robinson teaches that foil coordinates could have been implemented in place of camera coordinates.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the DigitalDesk system of Robinson to have created the claimed invention using the touch foil teaching of Robinson in section 5. It would have been obvious and desirable to have used a touch foil instead of a camera system as taught in Robinson so that the location tracking would not have been disrupted by visually blocking the line of sight between the camera lens and the stylus accidentally with the users hand or other object.

Regarding dependent claim 9, Robinson does not teach use of an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. However, Robinson does teach the possibility of using a touch foil to identify coordinates instead of a camera in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil teaching of Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback

presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

Regarding independent claim 18, Robinson teaches calibrating a camera-projector system that is aligned on a physical document in fig. 1 and section 4.3. Robinson teaches wherein the calibrating comprises processing a calibration location comprised by a plurality of locations appearing in the physical document and being referred to in an electronic document in section fig. 2 and section 4.2. Robinson teaches that the electronic document is not derived from the physical document in section 4.1. Robinson describes here that animated documents are created with a fairly conventional WYSIWYG editor. Thus, the electronic document is created with electronic document editing software and thus is not necessarily derived from a physical document. Robinson does disclose further than the electronic document can additionally be derived by scanning conventional printed documents, however this is in addition to creating the electronic document via electronic document creation software.

Robinson teaches wherein each location of the plurality of locations have absolute coordinates, the processing generating a calibration relationship between the absolute coordinates of the calibration location and the calibration camera coordinates of the camera-projector system, the calibration camera coordinates corresponding to where the calibration location appears in the physical document in fig. 2 and sections 4.2 and 5. Robinson teaches for each location of the plurality of locations, computing camera coordinates of the camera-projector system corresponding to where each location appears in the physical document, the computing utilizing the absolute coordinates of each location and the calibration relationship in fig. 2 and sections 4.2 and 5.

Robinson does not teach wherein the absolute coordinates include geographic coordinates. Musk does teach a map document which contains reference items related to geographic locations and identified by geographic coordinates. The map facilitates a user search of business services in a particular geographic area. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the map and geographic coordinate teachings of Musk to have improved the enhanced document of Robinson so that the paper document of Robinson would have presented a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map. Robinson teaches in the last three sentences of section 1 that its system has been re-engineered for more general use. Maps are traditionally composed of paper and thus would have been a good candidate for the general use DigitalDesk system taught by Robinson.

Robinson does not teach use of an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil taught by Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen

interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

Regarding dependent claim 19, Robinson teaches storing an identifier of each location, the absolute coordinates of each location, and the camera coordinates of each location in a table in sections 3 and 4.4. The each page representation in the registry maintains the associations between the coordinates and the interactors, or reference items, on the page. Robinson teaches storing camera coordinates in table called a page representation in section 3 and 4.4. Robinson does not teach storing foil coordinates because Robinson uses a camera location system instead of a touch foil system. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the touch foil teaching of Robinson into the DigitalDesk system of Robinson to have created the claimed invention. It would have been obvious and desirable to have used a touch foil instead of a camera system as taught in Robinson so that the location tracking would not have been disrupted by visually blocking the line of sight between the camera lens and the stylus accidentally with the users hand or other object.

Regarding dependent claim 20, Robinson teaches sending coordinates to the projector that illuminates a corresponding position on the physical document responsive to the projector coordinates. Robinson does not teach use foil coordinates or an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill

in the art at the time the invention was made to have combined the teachings of Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil taught by Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

Regarding dependent claim 21, Robinson teaches responsive to a first location of the plurality of locations being selected in the electronic document, sending the coordinates of the first location to the camera-projector system to cause an animation, which could be a blinking of light, at a first position upon the DigitalDesk corresponding to where the first location appears in the physical document in sections 3, 4.3, and 5.

Regarding dependent claim 22, Robinson teaches storing an address of a second electronic document in the table in sections 3 and 4.4.

Regarding dependent claim 23, Robinson teaches wherein the address of the second electronic document is a Uniform Resource Locator address of a web server hosting the second electronic document in sections 3 and 4.4.

Regarding dependent claims 24, Robinson does not teach use of an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of

Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil teaching of Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

Regarding dependent claim 25, Robinson teaches responsive to the DigitalDesk being activated at a first position corresponding to where a first location of the plurality of locations appears in the physical document, causing an animation, which could be a blinking of light, at the first position and highlighting the first position in the electronic document in sections 3, 4.3, and 5.

Regarding independent claim 31, Robinson teaches calibrating a camera-projector system that is aligned on a physical document in fig. 1 and section 4.3. Robinson teaches wherein the calibrating comprises processing a calibration location comprised by a plurality of locations appearing in the physical document and being referred to in an electronic document in section fig. 2 and section 4.2. Robinson teaches that the electronic document is not derived from the physical document in section 4.1. Robinson describes here that animated documents are created with a fairly conventional WYSIWYG editor. Thus, the electronic document is created with electronic document editing software and thus is not necessarily derived from a physical document. Robinson does disclose further than the electronic document can additionally be derived by scanning conventional printed documents, however this is in addition to creating the electronic document via electronic document creation software.

Robinson teaches wherein each location of the plurality of locations have absolute coordinates, the processing generating a calibration relationship between the absolute coordinates of the calibration location and the calibration camera coordinates of the camera-projector system, the calibration camera coordinates corresponding to where the calibration location appears in the physical document in fig. 2 and sections 4.2 and 5. Robinson teaches for each location of the plurality of locations, computing camera coordinates of the camera-projector system corresponding to where each location appears in the physical document, the computing utilizing the absolute coordinates of each location and the calibration relationship in fig. 2 and sections 4.2 and 5.

Robinson does not teach wherein the absolute coordinates include geographic coordinates. Musk does teach a map document which contains reference items related to geographic locations and identified by geographic coordinates. The map facilitates a user search of business services in a particular geographic area. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the map and geographic coordinate teachings of Musk to have improved the enhanced document of Robinson so that the paper document of Robinson would have presented a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map. Robinson teaches in the last three sentences of section 1 that its system has been re-engineered for more general use. Maps are traditionally composed of paper and thus would have been a good candidate for the general use DigitalDesk system taught by Robinson.

Robinson does not teach use of an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil taught by Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

Regarding dependent claim 32, Robinson teaches storing an identifier of each location, the absolute coordinates of each location, and the camera coordinates of each location in a table in sections 3 and 4.4. The each page representation in the registry maintains the associations between the coordinates and the interactors, or reference items, on the page. Robinson teaches storing camera coordinates in table called a page representation in section 3 and 4.4. Robinson does not teach storing foil coordinates because Robinson uses a camera location system instead of a touch foil system. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the touch foil teaching of Robinson into the DigitalDesk system of Robinson to have created the claimed invention. It would have been obvious and desirable to have used a touch foil instead of a camera system as taught in Robinson

so that the location tracking would not have been disrupted by visually blocking the line of sight between the camera lens and the stylus accidentally with the users hand or other object.

Regarding dependent claim 33, Robinson teaches storing an address of a second electronic document in the table in sections 3 and 4.4.

Regarding dependent claim 34, Robinson teaches wherein the address of the second electronic document is a Uniform Resource Locator address of a web server hosting the second electronic document in sections 3 and 4.4.

Regarding dependent claim 35, Robinson teaches sending coordinates to the projector that illuminates a corresponding position on the physical document responsive to the projector coordinates. Robinson does not teach use foil coordinates or an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil taught by Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

Regarding dependent claim 36, Robinson teaches responsive to a first location of the plurality of locations being selected in the electronic document, sending the coordinates of the

first location to the camera-projector system to cause an animation, which could be a blinking of light, at a first position upon the DigitalDesk corresponding to where the first location appears in the physical document in sections 3, 4.3, and 5.

Regarding dependent claim 37, Robinson does not teach use of an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil teaching of Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

Regarding dependent claim 38, Robinson teaches responsive to the DigitalDesk being activated at a first position corresponding to where a first location of the plurality of locations appears in the physical document, causing an animation, which could be a blinking of light, at the first position and highlighting the first position in the electronic document in sections 3, 4.3, and 5.

Response to Arguments

6. Applicant's arguments filed 1/3/2006 have been fully considered but they are not persuasive. Regarding Applicant's arguments in pages 10-12 that the combination of Robinson and Musk does not teach or suggest the limitation of the electronic document not being derived from the physical document as defined in claim 1, the Examiner respectfully disagrees. Robinson teaches inn section 4.1 that the animated documents may be created with a WYSIWYG editor, or in other words and electronic document editor. Therefore, the documents maybe created in electronic form prior to being printed out. Robinson offers further evidence of this in sections 4 and 4.4. In section 4 that an adaptor may be used to import or export hypertext. By enabling the registry to import hypertext, Robinson is teaching that the document may have an electronic origin. Furthermore, in section 4.4 teaches that given URL, the information can be captured on the associated web page in the registry. Again, this demonstrates that the origin of the document in the registry may be electronic and not paper. Therefore, the Examiner maintains that the combination of Robinson and Musk does teach the electronic document not being derived from the physical document.

Regarding Applicant's argument in pages 12-15 that the combination of Robinson and Musk does not teach determining geographic coordinates of the referenced item, defining the geographic link to the physical document, and encoding the geographic coordinates in the geographic link as defined in claim 1, the Examiner respectfully disagrees. The Examiner's position is that for Robinson to identify the coordinates from the link, as is taught in section 4.4, and use the coordinates to look up in the registry, the coordinates are thus encoded in the link on the document. The Examiner maintains that Robinson does teach determining coordinates of the

referenced item, defining the link to the physical document, and encoding the coordinates in the link under the broadest reasonable interpretations of coordinates. Musk does teach a map document which contains reference items related to geographic locations and identified by geographic coordinates in fig. 2 and col. 1 lines 32-57 and therefore suggests modifying Robinson to use and encode geographic coordinates. Robinson devotes section 6 to exploring possible applications for the DigitalDesk and thus disagrees with Applicant's position that Robinson is not concerned with how the physical and/or electronic document is used in user applications. Therefore, the Examiner maintains that the combination of Robinson and Musk teaches and suggests determining geographic coordinates of the referenced item, defining the geographic link to the physical document, and encoding the geographic coordinates in the geographic link.

Regarding Applicant's argument in pages 15 and 16 that the combination of Robinson and Musk does not teach or suggest wherein the step of encoding further includes the step of encoding an address of a second electronic document in the geographic link as defined in claim 2, the Examiner respectfully disagrees. Robinson teaches in sections 3, 4, 4.1, and 4.4 that the interactor, or link, on the document may point to another document, for example using a URL encoded in the interactor link. Musk does teach a map document which contains reference items related to geographic locations and identified by geographic coordinates in fig. 2 and col. 1 lines 32-57 and therefore suggests modifying Robinson to use and encode geographic coordinates. Therefore, the Examiner maintains that the combination of Robinson and Musk teaches and suggests wherein the step of encoding further includes the step of encoding an address of a second electronic document in the geographic link.

Regarding Applicant's argument in page 16 that the combination of Robinson and Musk does not teach or suggest storing the geographic coordinates in a table as defined in claim 4, the Examiner respectfully disagrees. Robinson teaches in sections 3 and 4.4 that coordinates are stored in the table so that they can be looked up to yield the appropriate activity. Since the coordinates are looked up in the registry table, they must be stored in the table.

Regarding Applicant's argument in pages 16-18 that the combination of Robinson and Musk does not teach or suggest that the physical document includes a map as defined in claim 7, the Examiner respectfully disagrees. Musk teaches a map document which contains reference items related to geographic locations and identified by geographic coordinates in fig. 2 and col. 1 lines 32-57 and therefore suggests modifying Robinson to apply the DigitalDesk to animate a map. Robinson devotes section 6 to exploring possible applications for the DigitalDesk and thus disagrees with Applicant's position that Robinson is not concerned with how the physical and/or electronic document is used in user applications. Therefore, the Examiner maintains that the combination of Robinson and Musk teaches and suggests wherein the physical document includes a map.

Regarding Applicant's argument in page 18 that the combination of Robinson and Musk does not teach or suggest that the electronic document is a hypertext markup language document and the geographic link uses syntactic conventions of hypertext markup language as defined in claim 8, the Examiner respectfully disagrees. Robinson teaches in section 4.4 that the electronic documents maybe imported from HTML documents and therefore teaches the limitations of claim 8.

Regarding Applicant's argument in pages 18-20 that the combination of Robinson and Musk does not teach or suggest wherein the geographic coordinates include longitude and latitude as defined in claim 10, the Examiner respectfully disagrees. Musk teaches a map document which contains reference items related to geographic locations and identified by geographic coordinates in fig. 2 and col. 1 lines 32-57 and therefore suggests modifying Robinson to apply the DigitalDesk to animate a map. Robinson devotes section 6 to exploring possible applications for the DigitalDesk and thus disagrees with Applicant's position that Robinson is not concerned with how the physical and/or electronic document is used in user applications. Musk does teach wherein the geographic coordinates include longitude and latitude in col. 3 lines 42-44. Therefore, the Examiner maintains that the combination of Robinson and Musk teaches and suggests wherein the geographic coordinates include longitude and latitude.

Regarding Applicant's arguments in pages 20-23 that the combination of Robinson, Musk, and Thompson does not teach a calibration relationship, touch foil, or a transparent organic LED for presenting feedback as defined in claim 5, the Examiner respectfully disagrees. Robinson shows in figure 2 and describes in section 4.2 that marks on the printed page are used to facilitate the recognition and location on the desktop. Determining the location is the calibration relationship and requires computing coordinates so that the interactors can be correctly recognized. The Examiner maintains the position that the graphics tablet taught by Robinson in section 5 is the claimed touch-foil and believes addition implied evidence that the graphics tablet is a touch foil because Robinson indicates that the graphics tablet might not work well when using a stack of papers. The Examiner believes this implies the touch foil might not accurately assess touches from the pen due to the thickness of the stack of papers. Finally, the

Examiner notes that Robinson teaches providing visual feedback in fig. 1 and section 5. Thompson teaches a TOLED in the abstract and fig. 2. One of the basic and notoriously well known uses of a display is to provide feedback to a user. Since Robinson teaches providing visual feedback, and Thompson provides an alternate technology for providing the visual feedback, the Examiner maintains that the combination of Robinson, Musk and Thompson teaches and suggests a TOLED display providing feedback to a user.

Regarding Applicant's argument in pages 23 and 24 that the combination of Robinson, Musk, and Thompson does not teach or suggest storing geographic coordinates in a table or storing foil coordinates in a table as defined in claim 6, the Examiner respectfully disagrees. The Examiner maintains that the registry described in section 3 organizes electronic document data and reads upon a table. Robinson shows in figure 2 and describes in section 4.2 that marks on the printed page are used to facilitate the recognition and location on the desktop. Determining the location is the calibration relationship and requires computing coordinates so that the interactors can be correctly recognized. The Examiner maintains the position that the graphics tablet taught by Robinson in section 5 is the claimed touch-foil and believes addition implied evidence that the graphics tablet is a touch foil because Robinson indicates that the graphics tablet might not work well when using a stack of papers. The Examiner believes this implies the touch foil might not accurately assess touches from the pen due to the thickness of the stack of papers. Therefore, the Examiner maintains the rejection of claim 6 as being unpatentable over Robinson, Musk, and Thompson.

Regarding Applicant's argument in pages 24-26 that the combination of Robinson, Musk, and Thompson does not teach or suggest wherein the opto-foil comprises a touch foil and a

transparent light emitting foil such that the touch foil is adapted to being directly touched or pressed and the light emitting foil is disposed between the touch foil and the physical document as defined in claim 9, the Examiner respectfully disagrees. The Examiner maintains the position that the graphics tablet taught by Robinson in section 5 is the claimed touch-foil and believes addition implied evidence that the graphics tablet is a touch foil because Robinson indicates that the graphics tablet might not work well when using a stack of papers. The Examiner believes this implies the touch foil might not accurately assess touches from the pen due to the thickness of the stack of papers. The Examiner also notes that Robinson teaches providing visual feedback in fig. 1 and section 5. Thompson teaches a TOLED in the abstract and fig. 2. One of the basic and notoriously well known uses of a display is to provide feedback to a user. Since Robinson teaches providing visual feedback, and Thompson provides an alternate technology for providing the visual feedback, the Examiner maintains that the combination of Robinson, Musk and Thompson teaches and suggests a TOLED display providing feedback to a user.

Regarding Applicant's argument in pages 26-30 that the combination of Robinson, Musk, and Thompson does not teach or suggest calibrating an opto-touch foil that is aligned on the physical document, the calibrating comprising processing a calibration location comprised by a plurality of location appearing in the physical document and being referred to in an electronic document, the electronic document not being derived from the physical document, each location of the plurality of locations having geographical coordinates, the processing generating a calibration relationship between the geographic coordinates of the calibration location and the calibration foil coordinates of the opto-touch foil, said calibration foil coordinates corresponding to where the calibration location appears in the physical document as defined in claims 18 and

31, the Examiner respectfully disagrees. Robinson teaches inn section 4.1 that the animated documents may be created with a WYSIWYG editor, or in other words and electronic document editor. Therefore, the documents maybe created in electronic form prior to being printed out. Robinson offers further evidence of this in sections 4 and 4.4. In section 4 that an adaptor may be used to import or export hypertext. By enabling the registry to import hypertext, Robinson is teaching that the document may have an electronic origin. Furthermore, in section 4.4 teaches that given URL, the information can be captured on the associated web page in the registry. Again, this demonstrates that the origin of the document in the registry may be electronic and not paper. Therefore, the Examiner maintains that the combination of Robinson and Musk does teach the electronic document not being derived from the physical document. Robinson shows in figure 2 and describes in section 4.2 that marks on the printed page are used to facilitate the recognition and location on the desktop. Determining the location is the calibration relationship and requires computing coordinates so that the interactors can be correctly recognized. The Examiner maintains the position that the graphics tablet taught by Robinson in section 5 is the claimed touch-foil and believes addition implied evidence that the graphics tablet is a touch foil because Robinson indicates that the graphics tablet might not work well when using a stack of papers. The Examiner believes this implies the touch foil might not accurately assess touches from the pen due to the thickness of the stack of papers. Finally, the Examiner notes that Robinson teaches providing visual feedback in fig. 1 and section 5. Thompson teaches a TOLED in the abstract and fig. 2. One of the basic and notoriously well known uses of a display is to provide feedback to a user. Since Robinson teaches providing visual feedback, and Thompson provides an alternate technology for providing the visual feedback, the Examiner

maintains that the combination of Robinson, Musk and Thompson teaches and suggests a TOLED display providing feedback to a user.

Regarding Applicant's argument in pages 30 and 31 that the combination of Robinson, Musk, and Thompson does not teach or suggest for each location of the plurality of locations, computing foil coordinates of the opto-touch foil corresponding to where each location appears in the physical document, said computing utilizing the geographic coordinates of each location and the calibration relationship as defined in claims 18 and 31, the Examiner respectfully disagrees. Robinson shows in figure 2 and describes in section 4.2 that marks on the printed page are used to facilitate the recognition and location on the desktop. Determining the location is the calibration relationship and requires computing coordinates so that the interactors can be correctly recognized. The Examiner maintains the position that the graphics tablet taught by Robinson in section 5 is the claimed touch-foil and believes addition implied evidence that the graphics tablet is a touch foil because Robinson indicates that the graphics tablet might not work well when using a stack of papers. The Examiner believes this implies the touch foil might not accurately assess touches from the pen due to the thickness of the stack of papers. The Examiner's position is that for Robinson to identify the coordinates from the link, as is taught in section 4.4, and use the coordinates to look up in the registry, the coordinates are thus encoded in the link on the document. The Examiner maintains that Robinson does teach determining coordinates of the referenced item, defining the link to the physical document, and encoding the coordinates in the link under the broadest reasonable interpretations of coordinates. Musk does teach a map document which contains reference items related to geographic locations and identified by geographic coordinates in fig. 2 and col. 1 lines 32-57 and therefore suggests

modifying Robinson to use and encode geographic coordinates. Robinson devotes section 6 to exploring possible applications for the DigitalDesk and thus disagrees with Applicant's position that Robinson is not concerned with how the physical and/or electronic document is used in user applications. Therefore, the Examiner maintains that the combination of Robinson, Musk, and Thompson teaches and suggests for each location of the plurality of locations, computing foil coordinates of the opto-touch foil corresponding to where each location appears in the physical document, said computing utilizing the geographic coordinates of each location and the calibration relationship.

Regarding Applicant's argument in pages 31 and 32 that the combination of Robinson, Musk, and Thompson does not teach or suggest storing in a table for each location of the plurality of locations: an identifier of each location, the geographic coordinates of each location, and the foil coordinates of each location as defined in claims 19 and 32, the Examiner respectfully disagrees. Robinson teaches in sections 3 and 4.4 that coordinates are stored in the table so that they can be looked up to yield the appropriate activity. Since the coordinates are looked up in the registry table, they must be stored in the table. The Examiner maintains the position that the graphics tablet taught by Robinson in section 5 is the claimed touch-foil and believes addition implied evidence that the graphics tablet is a touch foil because Robinson indicates that the graphics tablet might not work well when using a stack of papers. The Examiner believes this implies the touch foil might not accurately assess touches from the pen due to the thickness of the stack of papers.

Regarding Applicant's argument in pages 33 and 34 that the combination of Robinson, Musk, and Thompson does not teach or suggest sending the computed foil coordinates to the

opto-touch foil to cause illumination of positions upon the opto-touch foil corresponding to where each location of the plurality of locations appears in the physical document as defined in claims 20 and 35, the Examiner respectfully disagrees. The Examiner maintains the position that the graphics tablet taught by Robinson in section 5 is the claimed touch-foil and believes addition implied evidence that the graphics tablet is a touch foil because Robinson indicates that the graphics tablet might not work well when using a stack of papers. The Examiner believes this implies the touch foil might not accurately assess touches from the pen due to the thickness of the stack of papers. The Examiner also notes that Robinson teaches providing visual feedback in fig. 1 and section 5. Thompson teaches a TOLED in the abstract and fig. 2. One of the basic and notoriously well known uses of a display is to provide feedback to a user. Since Robinson teaches providing visual feedback, and Thompson provides an alternate technology for providing the visual feedback, the Examiner maintains that the combination of Robinson, Musk and Thompson teaches and suggests a TOLED display providing feedback to a user.

Regarding Applicant's argument in pages 34 and 35 that the combination of Robinson, Musk, and Thompson does not teach or suggest responsive to a first location of the plurality of location being selected in the electronic document, sending the foil coordinates of the first location to the opto-touch foil to cause blinking of light at a first position upon the opto-touch foil corresponding to where the first location appears in the physical document as defined in claims 21 and 36, the Examiner respectfully disagrees. Robinson teaches animated visual feedback for the user in fig. 1, the abstract, section 5, and section 6. Blinking light is an animated visual feedback and Robinson is certainly capable of blinking light. Robinson teaches projecting visual feedback animations at the interactors in sections 5 and 6 and therefore teaches

providing animations at specific locations on the physical document. Therefore, the Examiner maintains that the combination of Robinson, Musk, and Thompson teaches and suggests responsive to a first location of the plurality of location being selected in the electronic document, sending the foil coordinates of the first location to the opto-touch foil to cause blinking of light at a first position upon the opto-touch foil corresponding to where the first location appears in the physical document.

Regarding Applicant's argument in page 35 that the combination of Robinson, Musk, and Thompson does not teach or suggest storing an address of a second electronic document in the table as defined in claims 22 and 33, the Examiner respectfully disagrees. Robinson teaches in sections 3, 4, 4.1, and 4.4 that the interactor, or link, on the document may point to another document, for example using a URL encoded in the interactor link. Robinson teaches in sections 3 and 4.4 that coordinates are stored in the table so that they can be looked up to yield the appropriate activity. Since the coordinates are looked up in the registry table, they must be stored in the table. Therefore, the Examiner maintains that the combination of Robinson, Musk, and Thompson teaches and suggests storing an address of a second electronic document in the table.

Regarding Applicant's argument in pages 35-37 that the combination of Robinson, Musk, and Thompson does not teach or suggest wherein the opto-foil comprises a touch foil and a transparent light emitting foil such that the touch foil is adapted to being directly touched or pressed and the light emitting foil is disposed between the touch foil and the physical document as defined in claims 24 and 35, the Examiner respectfully disagrees. The Examiner maintains the position that the graphics tablet taught by Robinson in section 5 is the claimed touch-foil and

believes addition implied evidence that the graphics tablet is a touch foil because Robinson indicates that the graphics tablet might not work well when using a stack of papers. The Examiner believes this implies the touch foil might not accurately assess touches from the pen due to the thickness of the stack of papers. The Examiner also notes that Robinson teaches providing visual feedback in fig. 1 and section 5. Thompson teaches a TOLED in the abstract and fig. 2. One of the basic and notoriously well known uses of a display is to provide feedback to a user. Since Robinson teaches providing visual feedback, and Thompson provides an alternate technology for providing the visual feedback, the Examiner maintains that the combination of Robinson, Musk and Thompson teaches and suggests a TOLED display providing feedback to a user.

Regarding Applicant's argument in pages 37 and 38 that the combination of Robinson, Musk, and Thompson does not teach or suggest responsive to the opto-touch foil being pressed or touched at a first position corresponding to where a first location of the plurality of locations appears in the physical document, causing a blinking of light at the first position and highlighting the first location in the electronic document as defined in claims 25 and 38, the Examiner respectfully disagrees. Robinson teaches animated visual feedback for the user in fig. 1, the abstract, section 5, and section 6. Blinking light is an animated visual feedback and Robinson is certainly capable of blinking light. Robinson teaches projecting visual feedback animations at the interactors in sections 5 and 6 and therefore teaches providing animations at specific locations on the physical document. Therefore, the Examiner maintains that the combination of Robinson, Musk, and Thompson teaches and suggests responsive to a first location of the plurality of location being selected in the electronic document, sending the foil coordinates of the

first location to the opto-touch foil to cause blinking of light at a first position upon the opto-touch foil corresponding to where the first location appears in the physical document.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Smith whose telephone number is 571-272-4101. The examiner can normally be reached on Mondays-Fridays 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R. Herndon can be reached on 571-272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJS
3/10/2006

DOUG HUTTON
PRIMARY EXAMINER
TECH CENTER 2100